

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
29 April 2004 (29.04.2004)

PCT

(10) International Publication Number  
**WO 2004/035701 A1**

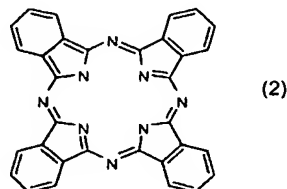
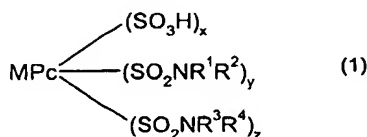
- (51) International Patent Classification<sup>7</sup>: **C09D 11/00**, C09B 47/26
- (21) International Application Number: PCT/GB2003/004035
- (22) International Filing Date:  
19 September 2003 (19.09.2003)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
0223817.8 12 October 2002 (12.10.2002) GB
- (71) Applicant (*for all designated States except US*): **AVECIA LIMITED** [GB/GB]; Hexagon House, Blackley, Manchester M9 8ZS (GB).
- (72) Inventor; and
- (75) Inventor/Applicant (*for US only*): **PATEL, Prakash** [GB/GB]; P.O. Box 42, Hexagon House, Blackley, Manchester M9 8ZS (GB).
- (74) Agents: **MORPETH, Fraser, Forrest et al.**; Avecia Limited, Intellectual Property Group, PO Box 42, Hexagon House, Blackley, Manchester M9 8ZS (GB).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

(54) Title: **PHthalOCYANINE COMPOUNDS, INK COMPOSITIONS COMPRISING SAID COMPOUNDS, AND PRINTING PROCESS THEREWITH**



(57) Abstract: A process for forming an image on a substrate comprising applying a composition comprising: (a) a compound of Formula (1) and salts thereof, wherein: M is Cu or Ni; Pc represents a phthalocyanine nucleus of Formula (2); R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> independently are H or optionally substituted C<sub>1-4</sub>alkyl; R<sup>4</sup> is optionally substituted C<sub>1-4</sub>-hydroxyalkyl; x is greater than 0 and less than 1.8; y and z are both greater than 0; and the sum of (x+y+z) is 2.4 to 4.5; and (b) a liquid medium: thereto by means of an ink jet printer. Also compositions, inks, compounds and ink jet printer cartridges.